

ABSTRACT

High strength polyethylene yarns useful in ballistic-resistant, cut-resistant and other applications, fabrics produced from these yarns and the methods by which the yarns and fabrics are made. An untwisted yarn of the invention
5 comprises a plurality of filaments in essentially parallel array and from about 0.5 to 5 weight percent of a water-dispersible binder material covering less than half the surfaces of the filaments. The yarn has a tenacity greater than about 17 g/d, a tensile modulus greater than about 300 g/d, fewer than 20 entanglements/meter in a scoured state and a width less than given by the formula

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$$W \leq 0.055 \sqrt{d}$$

where W is the yarn width in millimeters under a tensile load of 0.01 g/d measured on a flat surface and d is the yarn denier.